



# Equipment Engineering and Quality Assurance Technical Specification

Specification:  
EE&QA-886

OCS Inspection Car Consist Procurement  
Appendix D: Clearance Diagrams

Page: -

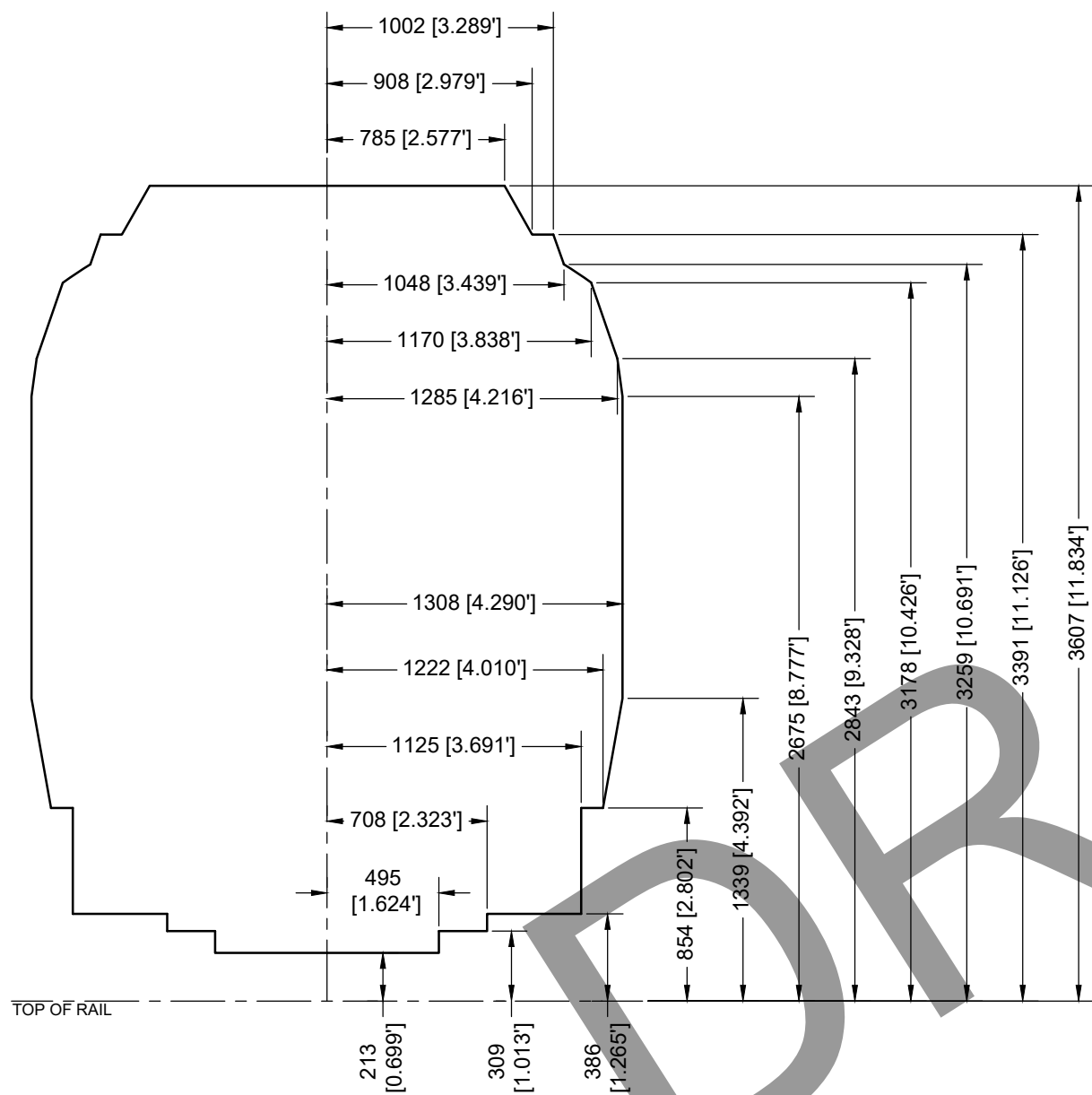
**Date:** December 19, 2017

**Revised:** November 25, 2020

**Revision:** 2.0

## Appendix D

### Clearance Diagrams



XXXXXX

DWG NO.

REVISIONS

REV.	DESCRIPTION	DWN. BY	APP'D	DATE
0.1	DRAFT RELEASE	MVS	—	06/18/20

NOTES:

- 1) CARBODY, WIRE MAINTENANCE LIFTS (STOWED), AND ALL CARBODY-MOUNTED EQUIPMENT MUST REMAIN WITHIN STATIC CLEARANCE ENVELOPE AT EMPTY WEIGHT, WITH NEW WHEELS, AND WHEELSETS CENTERED ON THE TRACK.

UNLESS OTHERWISE SPECIFIED PRIMARY DIMENSIONS ARE IN MILLIMETERS AND SECONDARY DIMENSIONS ARE IN FEET

TOLERANCES: UNLESS OTHERWISE SPECIFIED					<div><div><div>T</div></div>MASSACHUSETTS BAY TRANSPORTATION AUTHORITY</div>				
					DRAWN		TITLE:  OCS CAR STATIC ENVELOPE FOR CARBODY CLEARANCE		
USED ON					MVS				
					CHECKED				
					NBE				
					ENGINEER				
NEXT ASS'Y					—				
					APPROVED				
					SCALE		SIZE	DWG. NO.	REV
					1:30		B	XXXXXX	
					DATE			SHEET 1 OF 1	
					06/18/2020				

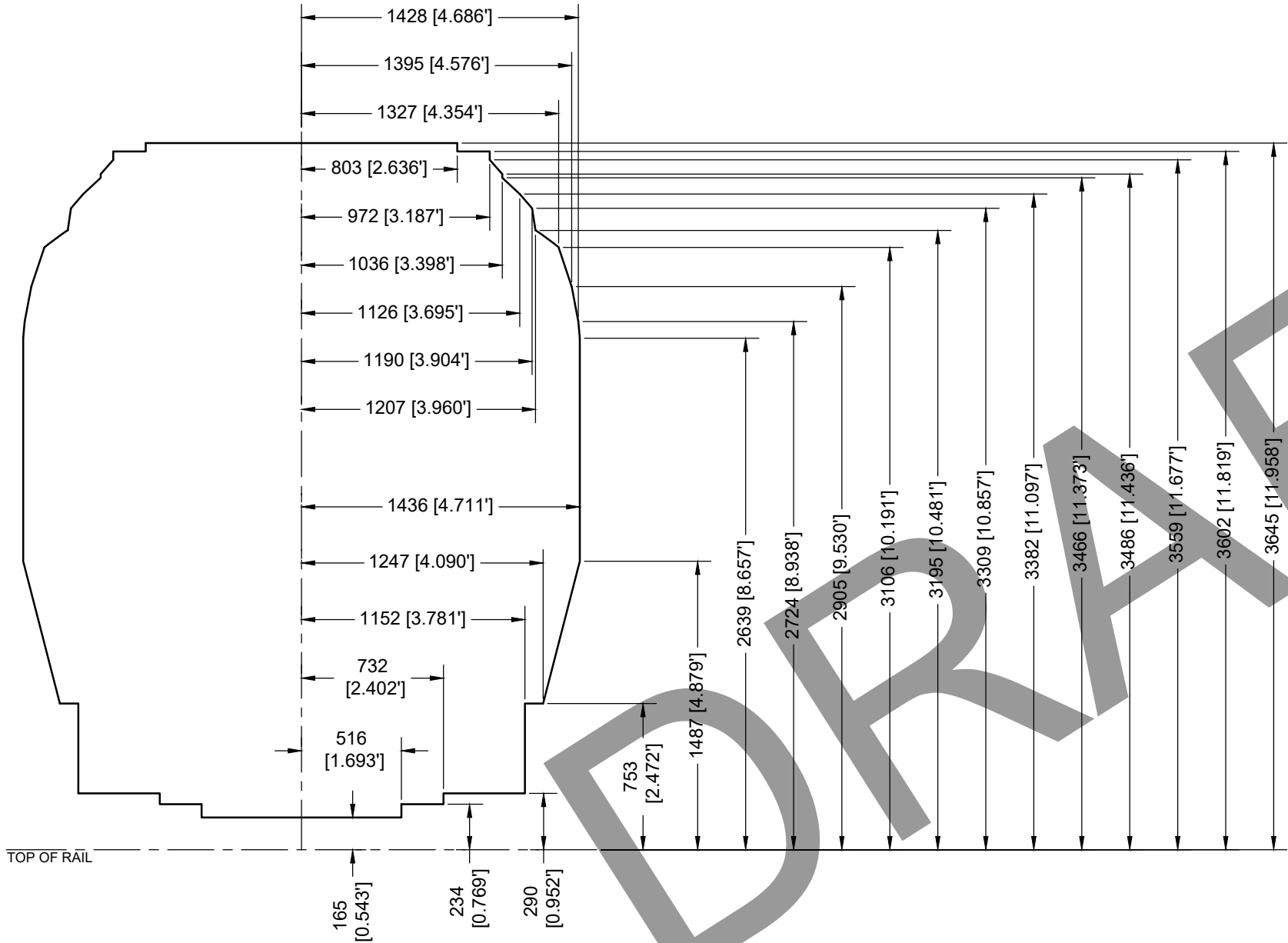
DRAWN BY LTK ENGINEERING SERVICES UNDER MBTA CONTRACT V93PS01.

XXXXXX

WORKING


REVISIONS

REV.	DESCRIPTION	DWN. BY	APP'D	DATE
0.1	DRAFT RELEASE	MVS	—	06/18/20



- NOTES:
- CARBODY, WIRE MAINTENANCE LIFTS (STOWED), AND ALL CARBODY-MOUNTED EQUIPMENT MUST REMAIN WITHIN DYNAMIC CLEARANCE ENVELOPE UNDER THE FOLLOWING CASES:  
CASE 1: EMPTY WEIGHT, SUSPENSION NOMINAL, CARBODY ROLL DUE TO FULL LATERAL ACCELERATION, NEW WHEELS, WHEELSETS CENTERED ON THE TRACK.  
CASE 2: FULLY LOADED, SUSPENSION NOMINAL, CARBODY ROLL DUE TO FULL LATERAL ACCELERATION, NEW WHEELS, WHEELSETS CENTERED ON THE TRACK.  
CASE 3: EMPTY WEIGHT, FAILURE OF ANY ONE SUSPENSION COMPONENT, CARBODY ROLL DUE TO FULL LATERAL ACCELERATION, NEW WHEELS, WHEELSETS CENTERED ON THE TRACK.  
CASE 4: FULLY LOADED, FAILURE OF ANY ONE SUSPENSION COMPONENT, CARBODY ROLL DUE TO FULL LATERAL ACCELERATION, NEW WHEELS, WHEELSETS CENTERED ON THE TRACK.
  - FULL LATERAL ACCELERATION IS THE LARGER OF THE MAXIMUM ACCELERATION FOUND USING DYNAMIC SIMULATIONS OR THE ACCELERATION EXPERIENCED BY A STATIC VEHICLE ON TRACK WITH THE MAXIMUM SUPERELEVATION.
  - VEHICLE MUST ALSO PROVIDE A MINIMUM OF 89MM LATERAL AND 76MM VERTICAL CLEARANCE FROM THE THIRD RAIL UNDER ALL VEHICLE AND TRACK CONDITIONS.

UNLESS OTHERWISE SPECIFIED PRIMARY DIMENSIONS ARE IN MILLIMETERS AND SECONDARY DIMENSIONS ARE IN FEET

TOLERANCES: UNLESS OTHERWISE SPECIFIED						MASSACHUSETTS BAY TRANSPORTATION AUTHORITY					
USED ON					DRAWN		TITLE:  OCS CAR DYNAMIC ENVELOPE FOR CARBODY CLEARANCE				
					MVS						
NEXT ASS'Y					CHECKED						
					NBE						
					ENGINEER						
					—						
					APPROVED						
					—						
					SCALE		SIZE	DWG. NO.	REV		
					1:30		B	XXXXXX	0.1		
DATE											
					06/18/2020		SHEET 1 OF 1				

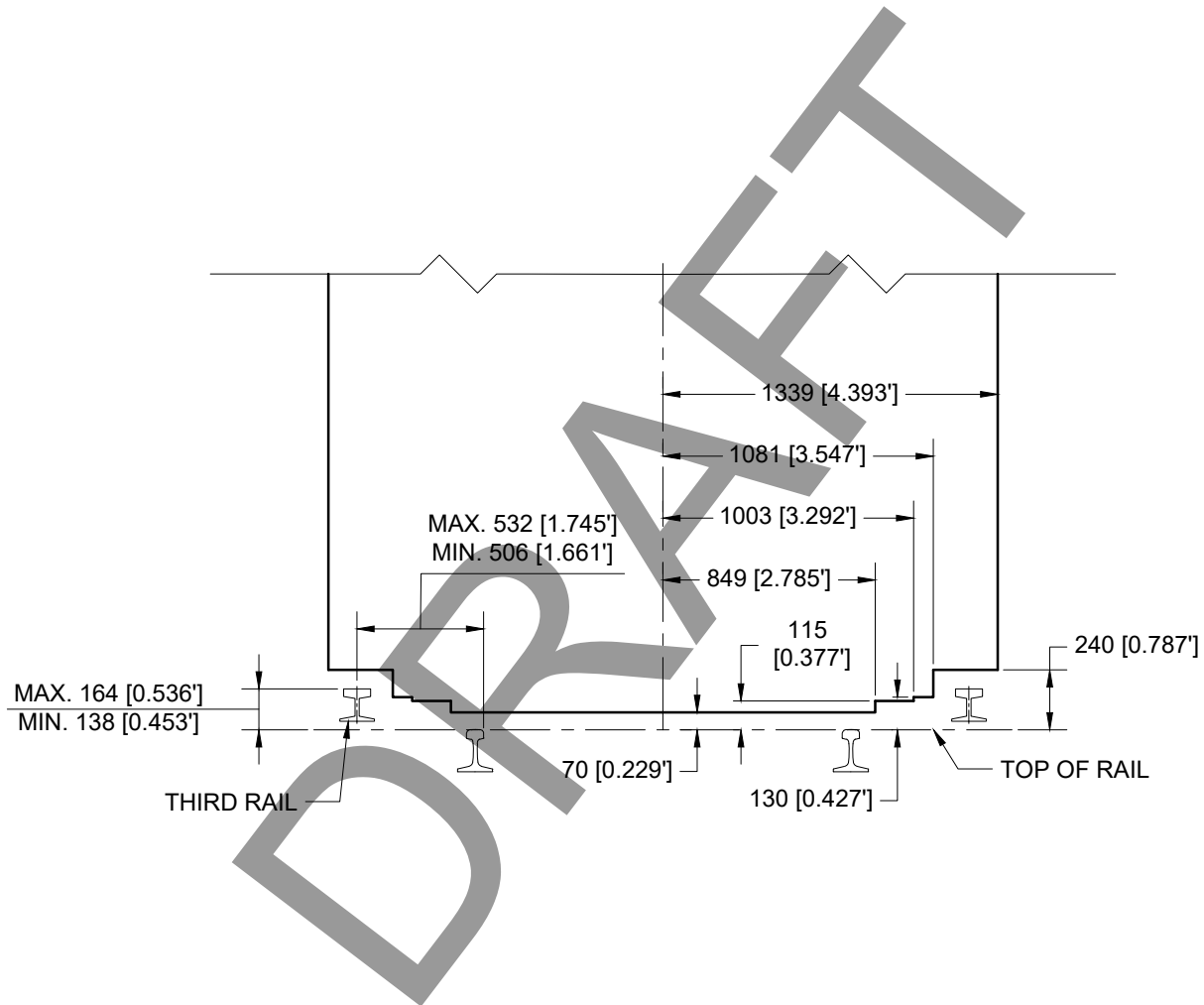
DRAWN BY LTK ENGINEERING SERVICES UNDER MBTA CONTRACT V93PS01.

XXXXXX

## REVISIONS

DRAWN BY LTK ENGINEERING  
SERVICES UNDER MBTA  
CONTRACT V93PS01.

REV.	DESCRIPTION	DWN. BY	APP'D	DATE
0.1	DRAFT RELEASE	MVS	—	06/19/20



UNLESS OTHERWISE SPECIFIED PRIMARY DIMENSIONS ARE IN MILLIMETERS AND SECONDARY DIMENSIONS ARE IN FEET

TOLERANCES:  
UNLESS OTHERWISE SPECIFIED



MASSACHUSETTS BAY TRANSPORTATION AUTHORITY

USED ON

DRAWN

MVS

CHECKED

NBE

NEXT ASS'Y

ENGINEER

—

APPROVED

—

SCALE

1:30

DATE

06/19/2020

TITLE:

OCS CAR  
DYNAMIC ENVELOPE FOR  
TRUCK CLEARANCE

SIZE

A

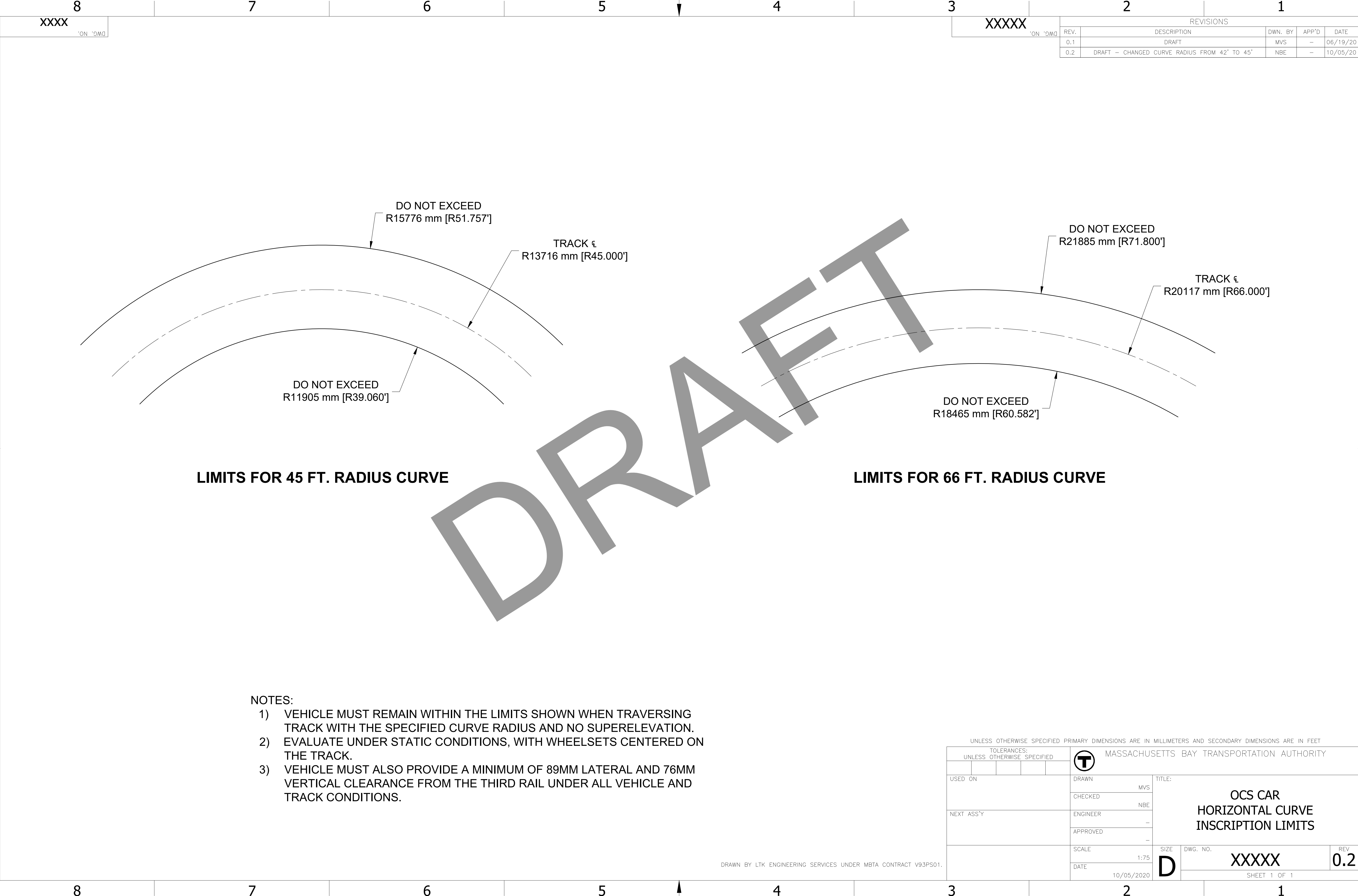
DWG. NO.

XXXXXX

REV

0.1

SHEET 1 OF 1




REVISIONS				
REV.	DESCRIPTION	DWN. BY	APP'D	DATE
0.1	DRAFT	MVS	—	06/19/20
0.2	DRAFT — CHANGED CURVE RADIUS FROM 42' TO 45'	NBE	—	10/05/20

LIMITS FOR 45 FT. RADIUS CURVE

LIMITS FOR 66 FT. RADIUS CURVE

- NOTES:
- 1) VEHICLE MUST REMAIN WITHIN THE LIMITS SHOWN WHEN TRAVERSING TRACK WITH THE SPECIFIED CURVE RADIUS AND NO SUPERELEVATION.
  - 2) EVALUATE UNDER STATIC CONDITIONS, WITH WHEELSETS CENTERED ON THE TRACK.
  - 3) VEHICLE MUST ALSO PROVIDE A MINIMUM OF 89MM LATERAL AND 76MM VERTICAL CLEARANCE FROM THE THIRD RAIL UNDER ALL VEHICLE AND TRACK CONDITIONS.

UNLESS OTHERWISE SPECIFIED PRIMARY DIMENSIONS ARE IN MILLIMETERS AND SECONDARY DIMENSIONS ARE IN FEET										
TOLERANCES: UNLESS OTHERWISE SPECIFIED						MASSACHUSETTS BAY TRANSPORTATION AUTHORITY				
USED ON					DRAWN	TITLE:  OCS CAR HORIZONTAL CURVE INSCRIPTION LIMITS				
					MVS					
NEXT ASS'Y					CHECKED					
					NBE					
					ENGINEER					
					—					
					APPROVED					
					—					
					SCALE	SIZE	DWG. NO.	REV		
					1:75	D	XXXXXX	0.2		
DATE	SHEET 1 OF 1									
					10/05/2020					

DRAWN BY LTK ENGINEERING SERVICES UNDER MBTA CONTRACT V93PS01.